

# **The Enterprise – Integration Modernization Playbook**

A Practical and Tactical Guide to  
Modernizing Enterprise Integration with  
the latest GenAI Capabilities and  
iPaaS Technology platforms

# Introduction

Despite the rapid adoption of new digital technologies, integration remains the Achilles' heel of enterprise technology ecosystems today. This is evidenced by the effort it takes to integrate when implementing new digital solutions (estimated at 35% ), and by the impediments that legacy integration systems pose in the evolution of enterprise architecture.

While Integration Platforms as a Service (iPaaS) have been the key element for modernizing enterprise integration, things have changed significantly over the last few years. The advent of Generative AI (GenAI) and the application of AI to data and app integration have raised the opportunity cost of sticking with legacy integration systems. At the same time, these shifts have also leapfrogged enterprise architecture miles ahead of where it was last year. With this ebook, we want to give you a current view of the enterprise integration landscape.



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## **More importantly, we want to help you understand:**

1. What is a legacy integration system? Is your enterprise using these?
2. What are the challenges that you face as a result of these systems?
3. What exactly is the business impact of sticking with the status quo?
4. How enterprise integration has evolved, and what we mean by modernizing. Get a bird's-eye view of the current integration market.
5. Why you need to modernize enterprise integration, and urgently, now that AI and generative integration are enabling unprecedented architectural and infrastructure agility.
6. How to build a business case for enterprise integration transformation.
7. How Birlasoft can help you execute a high-impact integration modernization initiative.

Let's start by understanding the root of the issue – that is, legacy integration systems.

# What are legacy integration systems?

## Let's rewind the clock a bit.

Not too long ago, all enterprise data, applications, and systems lived inside the data center. These systems were behind firewalls, humming quietly on racks of servers that only a select few could access. Integration, back then, was a different beast.

Vendors responded with software designed to orchestrate data flows, move payloads between databases, and enable basic service interactions between apps. But these integration systems were built for a monolithic, on-prem world. They came bundled with proprietary protocols, tight coupling, and in some cases, their own dedicated hardware.

## What are the characteristics of a legacy integration system?

When we say “legacy integration systems,” we’re talking about the tools and platforms that were fit for purpose 10–15 years ago, but now struggle to keep up with today’s cloud-first, API-driven, AI-augmented enterprise environments.



## But it's not just about age.

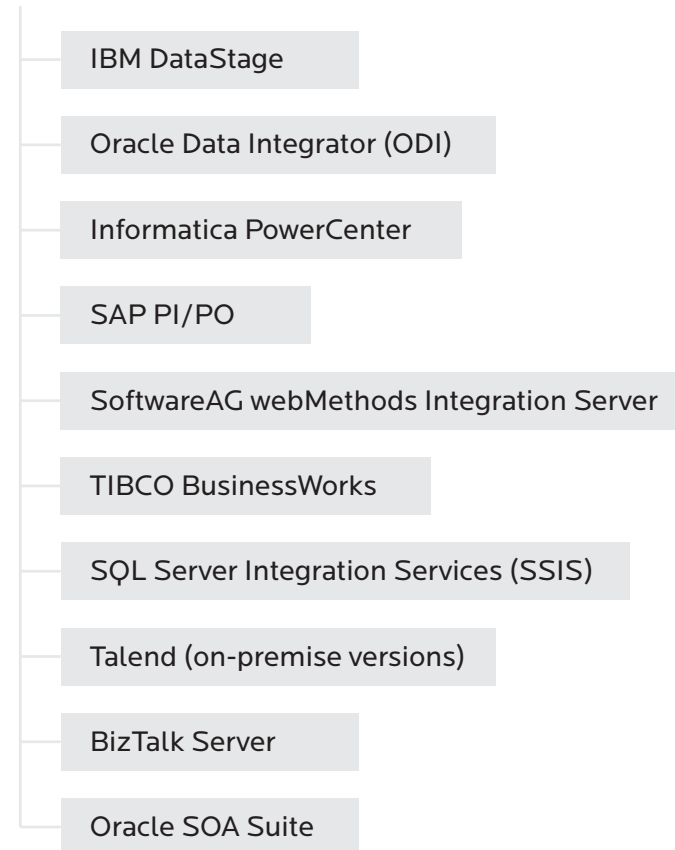
### A legacy integration system is one that:

Was built assuming data, services, and users are within a network perimeter.

- 1 Needs a lot of manual setup, governance, and specialist skills.
- 2 Lacks native support for microservices, serverless, and event-driven architectures.
- 3 Struggles when forced to play with cloud-native platforms and APIs.
- 4 Has no room for intelligent mapping, schema discovery, or self-healing pipelines.

## Familiar names in the legacy lineup

Here's a quick look at the classic players, some of which you may still be using, maintaining, or trying very hard to migrate away from:



This list isn't exhaustive, but you get the picture.

# What are the downsides of sticking with legacy integration systems?

If you're in the trenches stuck with them, you know the symptoms: integration projects take too long. Changes require custom code. Your IT teams spend more time maintaining pipelines than enabling innovation.

**To be more precise, they result in the following issues:**

## THEY'RE RIGID

New use case? New data format?  
New SaaS app? That's a lot of custom work, even if it's possible.

## THEY'RE HARD TO PLAY WITH

JSON, REST, GraphQL, Kafka streams – today's data doesn't come wrapped in yesterday's envelopes.

## THEY DON'T SCALE WELL

When volumes spike on Black Friday, quarterly reporting, or an unexpected business pivot, performance degrades quickly.

## TIME-CONSUMING UPGRADES

Upgrades become projects. Sometimes a multi-month one. They may break apps, require re-testing of pipelines, or force recertification.

## THEY'RE HIGH MAINTENANCE

You're paying for licenses, servers, and specialists. And even then, much of the maintenance is manual.

From a business view, they result in inefficient processes, higher expenses, and a slowdown in digital innovation. **Because slow integration = lost edge.**

## Why are we still using legacy integration systems?

Despite the cloud migration wave and the rise of alternatives, many enterprises still depend on legacy integration to stitch their environments together.

Why? Because they've invested years of development effort, business logic, and tribal knowledge into them. These systems are familiar, and stable – at least for now.

But they're also less secure from the purview of the modern risk landscape. At the same time, they're brittle, costly to maintain, and increasingly out of sync with the direction in which enterprise architecture is headed.

So, exactly – why are we still using legacy integration systems?

## What now?

**You modernize.**

In the next section, see what that means and how enterprise integration modernization is not just a technology intervention, but a strategic one that holds significant business value.



# All you need to know about integration platform modernization

## So, what do modern integration platforms look like?

Modern integration platforms are made for the cloud-native, AI-driven, always-on enterprise.

Today's leading integration solutions are delivered as Integration Platforms as a Service (iPaaS). They're designed to handle the full spectrum of integration needs across cloud, on-prem, and hybrid environments. These platforms orchestrate data, events, APIs, and applications with speed and agility.

## At their core, modern integration platforms help organizations:

### Connect everything to everything:

From legacy databases to SaaS apps, from IoT devices to AI models, the platform speaks every language.

### Scale effortlessly:

They're built on cloud infrastructure, meaning performance flexes up or down as needed.





### Move at the speed of change:

Whether you're spinning up a new digital channel or plugging in a new AI tool, integration doesn't slow you down.

### Simplify complexity:

With intuitive low-code/no-code interfaces, built-in connectors, and AI-assisted automation, integration becomes less of a headache.

## Here are some examples of modern integration platforms in the market today:

Established Players	Hyperscale Integration Services	ERP Integration Technology
Mulesoft	Azure Integration Services	Oracle Integration Cloud
Boomi	Amazon Integration Service	SAP Integration Suite
SnapLogic	Google Integration Services	

### What's changed, and how?

Where once integration meant fragile scripts or complex middleware, today's platforms treat APIs as products, not plumbing. This shift is foundational. Organizations adopting API-first strategies have accelerated time to market by up to 67%, and API and related offerings now fuel nearly 33% of revenues for average companies.

**Integration Platforms as a Service are the linchpin of this evolution. Here are four ways in which they have redefined their play in enterprise architecture:**

**API-centric design:** Modern iPaaS platforms support full API lifecycle management, from design and versioning to deployment and retirement.

**Composability and reusable architecture:** Today, integrations aren't built from scratch every time. iPaaS platforms allow you to compose new services from existing ones, accelerating innovation and reducing rework.

**Marketplace-driven discovery and governance:** With built-in developer portals and discovery tools, iPaaS platforms promote reuse across internal teams and external partners. Another noteworthy fact is that each reused API can save \$20k–\$35k in development costs.

**Microservices and observability readiness:** iPaaS platforms are optimized for microservices integration, with service discovery, traffic routing, and monitoring baked in.

## **Yes, you should modernize. But why now?**

Modernizing your integration platform is no longer optional. It's critical to staying agile, innovative, and competitive. Here are five compelling reasons you need to act now:

### **#1 Cloud-native security and connectivity**

Cloud providers have matured their security, compliance, and resilience offerings to enterprise-grade levels. Modern iPaaS solutions come with built-in, continually updated connectors for AWS, Azure, Google Cloud, and leading SaaS applications. This eliminates the need for custom connectors and removes security gaps that plague legacy tools.

### **#2 AI and GenAI-driven automation and intelligence**

Generative AI agents are transforming integration design, development, and operations. By understanding natural-language prompts, they can draft integration flows, generate mapping logic, and suggest optimizations in minutes. AI-powered monitoring continuously scans data flows for anomalies and self-heals common errors. This frees your teams to focus on strategic initiatives rather than firefighting pipelines.

### **#3 Accelerating innovation through real-time insight**

Modern integration platforms turn data traffic into an insights engine. Real-time data virtualization delivers a unified business context to analytics and AI models, ensuring every decision is based on up-to-the-second information. AI pattern harvesting plugs into your integration flows, enabling detection of hidden trends and surfacing opportunities for process improvement and course correction before issues escalate.

### **#4 Citizen integration and self-service**

With low-code interfaces and virtual API catalogs, business users can spin up new data feeds, trigger workflows, and adjust integration logic without waiting on IT. Embedded chatbots and self-service portals democratize access to data, speeding time-to-insight and shifting routine tasks out of the IT backlog.

### **#5 Standing still may prove very costly**

Legacy middleware demands constant maintenance, manual patches, and custom workarounds. Every hour spent on upkeep is an hour lost for innovation. By modernizing now, you shift your budget from fire-fighting to forward-looking projects. This unlocks new revenue streams, improves customer experience, and ensures your architecture can evolve with your business.

# You're convinced. Here's how to get started with enterprise integration transformation

Modernizing legacy systems isn't a weekend project. It takes budget, buy-in, and a whole lot of patience. But before you can touch a line of code, you'll need to convince leadership that it's worth the investment. That means talking to IT, finance, and the business in a language they understand: outcomes, not architecture. Here's a simple framework with talking points to help you build a compelling business case and define a roadmap for integration modernization.

## STEP 01

### START WITH THE PAIN

Modernization begins with the problems you already live with. And while "technical debt" might make sense to IT, other stakeholders need to hear it in terms that matter: wasted hours, lost revenue, missed opportunities.



Start with a current-state assessment:

- 1 What's breaking down?**  
Identify brittle, manual, or failure-prone integrations.
- 2 What's wasting time?**  
Quantify hours spent on patching, troubleshooting, or rework.
- 3 What's blocking progress?**  
Surface delays in launching new products, connecting new apps, or enabling business teams.

Use this inventory to separate what should be migrated, what should be retired, and what can stay on life support (for now).

## STEP 02

### QUANTIFY THE IMPACT *(and not just the cost)*

Yes, modernization is an investment. But the cost of doing nothing is often much higher. Your business case should shift the conversation from “how much will it cost?” to “how much are we already losing?”

Here are some tangible levers to consider:

**Integration development time:** Estimate how long it takes to build or modify integrations today, and how a modern platform could reduce that.

**Upgrade drag:** Legacy platforms often tie up teams during upgrade cycles. Estimate the hours and cost of version control, testing, and rework.

**Training overhead:** How long does it take to ramp up new team members on legacy tools? Multiply that by your onboarding needs.

**Manual workarounds:** Look at how many hours are spent every month doing tasks that should be automated.

**Business delays:** Map out business initiatives that were delayed or downgraded because integration took too long, or couldn't be delivered in time.

This is where finance starts to lean in. When you can show how integration problems hit the top or bottom line, the conversation shifts from IT cost to business value.

## STEP 03

### TIE BENEFITS TO STRATEGIC GOALS

Now that you've shown what's broken, it's time to show what's possible. Use these talking points to connect integration modernization with broader business outcomes:

**Efficiency that scales:** Cloud-native integration platforms eliminate upgrade burdens and allow IT to focus on innovation instead of infrastructure. With reusable components and low-code environments, your team can deliver more with less.

**Faster time-to-market:** Modern integrations don't just plug in – they launch faster. That means fewer delays, quicker product rollouts, and the agility to respond when your market shifts (or when your competitors do).

**AI- and automation-readiness:** AI doesn't work in silos. It needs clean, current, connected data. A modern integration backbone makes that possible.

**Improved compliance and security posture:** Modern platforms come with built-in security and compliance frameworks, so your integrations don't become your next audit headache.

#### STEP 04

### DEFINE SUCCESS AND SET ROI TARGETS

Goals make everything real. Without goals, you're just "doing a project." With goals, you're enabling outcomes.

Start by answering:

- What does success look like in 12 months?
- How many integrations will be migrated or retired?
- What cost or time savings do we expect per integration?
- How quickly should we be able to connect new systems?

The more tangible, the better. Even rough numbers give leadership something to anchor to, and give your team something to aim for.

#### STEP 05

### DON'T GO AT IT ALONE

Enterprise integration modernization can't be a solo mission. Tap into your partner network to help estimate scope, investment, and ROI. For example, Birlasoft's Integration Center of Excellence works with clients to assess existing integration estates and co-build the business case using real data, not guesswork.



# We know what success looks like

With nearly 30 years of integration experience, Birlasoft's Integration Center of Excellence has shaped a modernization philosophy that adapts to the evolving needs of enterprises.

**This philosophy is anchored in five core approaches, each addressing a specific aspect of integration transformation:**

- Integration First, which ensures that integration is prioritized in the architecture and design phase, and not treated as an afterthought.
- Integration Factory, which brings industry-vetted, scalable practices to integration development and migration, enabling faster delivery with consistent quality.
- Resilient Integrations, which focuses on robustness and fault-tolerance in integration managed services.
- Adaptive/Generative Integrations to leverage AI to evolve integration strategies in line with changing business and technology landscapes.
- Citizen Integrator, which empowers non-technical users to participate in integration efforts through intuitive, AI-enabled platforms.





By applying these approaches, we have driven dozens of integration transformation initiatives to success:

Integration Modernization	Customer
Informatica to Boomi	Global HVAC and climate solutions manufacturer
Oracle BPM to Boomi Flow	Leading oilfield services and equipment provider
Tibco to Azure Integration Services	Global technology firm
webMethods to Oracle Integration Cloud	Global industrial equipment provider
Oracle SOA to Oracle Integration Cloud	Major telecom operator
webMethods to Azure Integration	Government-backed energy enterprise
ESB to Google Integration Services	Global healthcare and pharmaceutical company
Point to Point to Azure Integration Services	Specialty insurance provider
Point to Point to Snaplogic	Global environmental and utilities provider
Oracle SOA to Mulesoft	Medical technology and devices company

To sum it up, we don't just modernize platforms. We modernize how businesses think, build, and scale with integration. Are you ready to make enterprise integration your competitive edge? **Let us be your trusted partner in this transformation journey.**

# About the Author



**Nitin Gajale** is the AVP for Enterprise Integration at Birlasoft, with over two decades of experience in driving large-scale digital transformation programs. He leads a global team focused on modernizing B2B/EDI ecosystems, enabling API-led architectures, and delivering AI-powered integration solutions. Nitin is deeply committed to building future-ready, intelligent enterprise platforms and plays a key role in shaping Birlasoft's strategic partnerships and solution roadmaps in the integration space.



## Empowered by **Innovation**

Birlasoft combines the power of domain, enterprise, and digital technologies to reimagine business processes for customers and their ecosystem. Its consultative and design-thinking approach makes societies more productive by helping customers run businesses. As part of the multibillion-dollar diversified CKA Birla Group, Birlasoft with its 12,000+ professionals, is committed to continuing the Group's 170-year heritage of building sustainable communities.

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[contactus@birlasoft.com](mailto:contactus@birlasoft.com) | [birlasoft.com](https://birlasoft.com)



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